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09/926,018	11/15/2001	Stephen Pickering	PICK3001/REF	9757

7590

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EXAMINER

WRIGHT, WILLIAM G

ART UNIT

1754

PAPER NUMBER

6

DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/926,018

Applicant(s)

PICKERING ET AL.

Examiner

William G. Wright SR.

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-19 is/are allowed.
- 6) ☒ Claim(s) 20-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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The disclosure is objected to because of the following informalities: Line 10 of claim 1, the word "oxidant" is thought by the Examiner to be incorrect, did the applicants mean to use the word "oxidizing" instead?

Appropriate correction is required.

Claims 20 and 21 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20 and 21 recite the limitation "said hydrothermal treatment" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-<sup>23</sup>~~24~~ and 26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kasai et al. '343 or Pirzada et al. '507.

The particles claimed are found in the Kasai reference at column 3 line 11 et seq. The Pirzada reference teaches the particles at Example 5 of column 11. Note MPEP § 2113 regarding product-by-process claims.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

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Claims 22 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over McCandlish et al. '269.

The McCandlish reference teaches a metal oxide product as the nanoscale metal oxide at column 2 line 39 et seq. Note MPEP § 2113 regarding product-by-process claims. The Examples of the reference also teach the nanoscale product of the instant claim.

Claims 22-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kasai et al. '343 or Hanawa et al. '837 or Pirzada et al. '507.

Kasai teaches ceric oxide particles in the nanosize range found in the instant claims. This teaching is found in the reference at claim 1 and column 3 line 9 et seq. Hanawa teaches cerium oxide ultrafine particles in the size range found in the instant claims at claims 1 and 3 and in Example 1 of column 7 line 36 et seq. Pirzada teaches cerium oxide nanoscale particles as found in the instant claims at Example 5 of column 11. Each reference teaches the claimed utility found in instant claim 27. Note Kasai at column 1 line 5 et seq.. Hanawa teaches the utility at column 1 line 10 et seq. and at column 1 line 27 et seq. Pirzada teaches the instant utility at column 1 line 37 et seq. and at column 2 line 10 et seq.

The references each teach the claimed oxide particles in the size range claimed for the utilities disclosed and claimed in the

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instant file. All features of the instant claims are found in the references and no supporting reference is needed.

The instant claims would have been obvious to a practitioner using the teachings of the applied references. The use of In re Malagari, 182 USPQ 549 is applied to refer to the overlapping ranges in the particle size taught in the instant claims and in the references applied. Also note the MPEP § 2113 for the authority regarding product-by-process claims and the product produced by such.

Claims 1-19 are allowed over the applied art. The applied art does not teach the process of instant claims 1-19 where an aqueous process for homogeneous precipitation of a metal oxide is performed using a solution of a metal capable of at least two cationic oxidation states. The aqueous solution of the metal is provided in the lower cationic oxidation state, adding an oxidant to oxidize the metal in the solution to a higher cationic oxidation state, before precipitation occurs. The rate of oxidation is reduced by cooling the aqueous solution of the lower oxidation state metal and/or the oxidant prior to mixing.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to William G. Wright, Sr. whose telephone number is (703) 305-7792. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9310 for the regular communications and (703) 872-9311 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1495.



W. G. Wright, Sr.:cdc

June 23, 2003



**STEVEN BOS  
PRIMARY EXAMINER  
GROUP 1100**